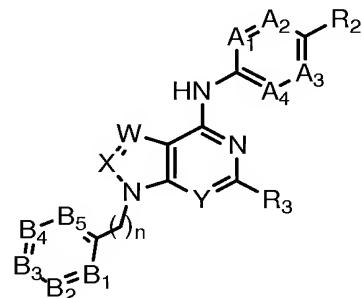


AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently amended) A compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

n is 0 or 1;

W, X and Y are each independently N or CR₁;

A_1, A_2, A_3 and A_4 are each independently N or CR₄;

B_1, B_2, B_3, B_4 and B_5 are each independently N or CR_5 ;

R₁ is independently selected at each occurrence from hydrogen, halogen, hydroxy, cyano, nitro, amino, C₁-C₆alkyl, haloC₁-C₆alkyl, haloC₁-C₆alkoxy, C₁-C₆alkoxycarbonyl, aminosulfonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- or di-(C₁-C₆alkyl)aminoC₀-C₄alkyl;

R_2 is cyano, cyanoC₁-C₆alkyl, haloC₁-C₆alkyl, C₁-C₆alkylsulfonyl, haloC₁-C₆alkylsulfonyl, mono- or di-(C₁-C₆alkyl)aminosulfonyl or mono- or di-(C₁-C₆alkyl)aminocarbonyl;

R_3 is:

- (i) hydrogen, halogen, nitro or cyano; or
- (ii) a group of the formula $-R_x-L-M-R_y$, wherein:

R_x is C_0 - C_3 alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO₂, (C=O)_pN(R_z), N(R_z)(C=O)_p, SO₂N(R_z), or N(R_z)SO₂, wherein p is 0 or 1;

M is a single covalent bond, C₁-C₈alkyl, C₂-C₈alkenyl C₄-C₈alkenyl or C₂-C₈alkynyl C₄-C₈alkynyl, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkoxy, (C₁-C₈alkyl)aminoC₀-C₈alkyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or
- (c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or
- (c) taken together with R_x or R_y to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R₄ is independently selected at each occurrence from R_b, or two adjacent R₄ groups are taken together to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 4 substituents independently chosen from R_b;

R₅ is independently selected at each occurrence from R_b, or two adjacent R₅ groups are taken together to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 4 substituents independently chosen from R_b; and

R_b is independently chosen at each occurrence from:

(i) hydrogen, hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and -COOH; and

(ii) C₁-C₈alkyl, C₂-C₈alkenylG₁-C₈alkenyl, C₂-C₈alkynyG₁-C₈alkynyl, C₃-C₈cycloalkyl, haloC₁-C₈alkyl, C₁-C₈alkoxy, haloC₁-C₈alkoxy, C₁-C₈alkanoyl, C₁-C₈alkanoyloxy, C₁-C₈alkylthio, C₂-C₈alkyl ether, C₁-C₆alkoxycarbonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C₁-C₄alkyl, C₁-C₄alkoxy, hydroxyC₁-C₄alkyl, haloC₁-C₄alkyl, and mono- and di-(C₁-C₄alkyl)amino.

2. (Original) A compound or salt according to claim 1, wherein Y is N.

3. (Currently amended) A compound or salt according to claim 1-~~or claim 2~~, wherein W is N and X is CR₁.

4. (Currently amended) A compound or salt according to claim 1-~~or claim 2~~, wherein X is N and W is CR₁.

5. (Currently amended) A compound or salt according to ~~any one of claims 1-4~~claim 1, wherein n is 0.

6. (Currently amended) A compound or salt according to ~~any one of claims 1-5~~claim 1, wherein A₂ and A₃ are C-CH₃, C-halogen or CH.

7. (Original) A compound or salt according to claim 6, wherein A₂ and A₃ are CH.

8. (Currently amended) A compound or salt according to ~~any one of claims 1-7~~claim 1, wherein A₁ and A₄ are independently N or CH.

9. (Currently amended) A compound or salt according to ~~any one of claims 1-8~~claim 1, wherein each R₄ is independently chosen from hydrogen, halogen, cyano, C₁-C₆alkyl, C₂-C₆alkenylC₄-C₆alkenyl, haloC₁-C₆alkyl, C₁-C₆alkoxy and haloC₁-C₆alkoxy.

10. (Currently amended) A compound or salt according to ~~any one of claims 1-9~~claim 1, wherein at least two of B₁, B₂, B₃, B₄ and B₅ are CR₅, and wherein at least one R₅ is not hydrogen.

11. (Original) A compound or salt according to claim 10, wherein each R₅ is independently chosen from hydrogen, halogen, cyano, -COOH, C₁-C₆alkyl, C₂-C₆alkenylC₄-C₆alkenyl, haloC₁-C₆alkyl, C₁-C₆alkoxy and haloC₁-C₆alkoxy.

12. (Currently amended) A compound or salt according to ~~any one of claims 1-11~~claim 1, wherein R₂ is trifluoromethyl, methylsulfonyl, trifluoromethylsulfonyl or 2-cyano-prop-2-yl.

13. (Currently amended) A compound or salt according to ~~any one of claims 1-12~~claim 1, wherein R₃ is:

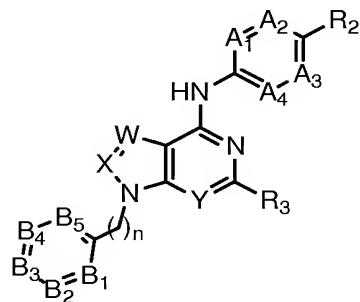
(a) hydrogen, halogen or cyano; or

(b) C₁-C₆alkyl, C₂-C₆alkenylC₄-C₆alkenyl, C₂-C₆alkyl ether, mono- or di-(C₁-C₆alkyl)aminoC₀-C₄alkyl or (4- to 10-membered heterocycloalkyl)C₀-C₆alkyl, each of which is substituted with from 0 to 4 substituents independently chosen from halogen, cyano, C₁-C₄alkyl, and haloC₁-C₄alkyl.

14. (Original) A compound or salt according to claim 13, wherein R₃ is hydrogen.

15. (Original) A compound or salt according to claim 13, wherein R₃ is C₂-C₆alkyl ether, mono- or di-(C₁-C₆alkyl)aminoC₀-C₄alkyl or (4- to 10-membered heterocycloalkyl)C₀-C₆alkyl, each of which is substituted with from 0 to 4 substituents independently chosen from halogen, cyano, methyl and ethyl.

16. (Currently amended) A compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

n is 0 or 1;

W, X and Y are each independently N or CR₁;

A₁, A₂, A₃ and A₄ are each independently N or CR₄; such that A₂ and A₃ are not C₁-C₆alkyl if R₂ is C₁-C₆alkyl;

B₁, B₂, B₃, B₄ and B₅ are each independently N or CR₅;

R₁ is independently selected at each occurrence from hydrogen, halogen, hydroxy, cyano, nitro, amino, C₁-C₆alkyl, haloC₁-C₆alkyl, haloC₁-C₆alkoxy, C₁-C₆alkoxycarbonyl, aminosulfonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl;

R₂ is halogen, cyano, amino, C₃-C₆alkyl, cyanoC₁-C₆alkyl, haloC₁-C₆alkyl, mono- or di-(C₁-C₆alkyl)aminoC₀-C₄alkyl, C₁-C₆alkylsulfonyl, haloC₁-C₆alkylsulfonyl, mono- or di-(C₁-C₆alkyl)aminosulfonyl, or mono- or di-(C₁-C₆alkyl)aminocarbonyl;

R₃ is:

- (i) hydrogen, nitro or cyano; or
- (ii) a group of the formula $-R_x-L-M-R_y$, wherein:

R_x is C₀-C₃alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO₂, (C=O)_pN(R_z), N(R_z)(C=O)_p, SO₂N(R_z), or N(R_z)SO₂, wherein p is 0 or 1;

M is a single covalent bond, C₁-C₈alkyl, C₂-C₈alkenyl C₄-C₈alkenyl or C₂-C₈alkynylC₄-C₈alkynyl, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkoxy, (C₁-C₈alkyl)aminoC₀-C₈alkyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or
- (c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_y to form a 3- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

such that R₃ is not an unsubstituted alkyl group;

R₄ is independently selected at each occurrence from R_b, or two adjacent R₄ groups are taken together to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 4 substituents independently chosen from R_b;

R₅ is independently selected at each occurrence from hydrogen, hydroxy, halogen, amino, aminocarbonyl, cyano, nitro, -COOH, C₁-C₆alkyl, C₂-C₆alkenyl|C₄-C₆alkenyl, C₂-C₈alkynyl|C₄-C₆alkynyl, haloC₁-C₆alkyl, aminoC₁-C₆alkyl, cyanoC₁-C₆alkyl, C₁-C₆alkoxy, haloC₁-C₆alkoxy, C₁-C₈alkanoyl, C₁-C₈alkanoyloxy, C₁-C₈alkylthio, C₂-C₈alkyl ether, C₁-C₆alkoxycarbonyl, aminosulfonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl; or two adjacent R₅ groups are taken together to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 4 substituents independently chosen from R_b; and

R_b is independently chosen at each occurrence from:

- (i) hydrogen, hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and -COOH; and
- (ii) C₁-C₈alkyl, C₂-C₈alkenyl|C₄-C₈alkenyl, C₂-C₈alkynyl|C₄-C₈alkynyl, C₃-C₈cycloalkyl, haloC₁-C₈alkyl, C₁-C₈alkoxy, haloC₁-C₈alkoxy, C₁-C₈alkanoyl, C₁-C₈alkanoyloxy, C₁-C₈alkylthio, C₂-C₈alkyl ether, C₁-C₆alkoxycarbonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C₁-C₄alkyl, C₁-C₄alkoxy, hydroxyC₁-C₄alkyl, haloC₁-C₄alkyl, and mono- and di-(C₁-C₄alkyl)amino.

17. (Original) A compound or salt according to claim 16, wherein Y is N.

18. (Currently amended) A compound or salt according to claim 16—or ~~claim 17~~, wherein W is N and X is CR₁.

19. (Currently amended) A compound or salt according to claim 16—or ~~claim 17~~, wherein X is N and W is CR₁.

20. (Currently amended) A compound or salt according to ~~any one of claims 16–19~~claim 16, wherein n is 0.

21. (Currently amended) A compound or salt according to ~~any one of claims 16–20~~claim 16, wherein A₂ and A₃ are CH.

22. (Currently amended) A compound or salt according to claim 16~~any one of claims 16–21~~, wherein A₁ and A₄ are independently N or CH.

23. (Currently amended) A compound or salt according to claim 16~~any one of claims 16–22~~, wherein at least two of B₁, B₂, B₃, B₄ and B₅ are CR₅, and wherein at least one R₅ is not hydrogen.

24. (Currently amended) A compound or salt according to claim 23, wherein each R₅ is independently chosen from hydrogen, halogen, cyano, -COOH, C₁-C₆alkyl, C₂-C₆alkenylG₁-C₆alkenyl, haloC₁-C₆alkyl, C₁-C₆alkoxy and haloC₁-C₆alkoxy.

25. (Currently amended) A compound or salt according to claim 16~~any one of claims 16–24~~, wherein R₂ is halogen, isopropyl, t-butyl, trifluoromethyl, methylsulfonyl, trifluoromethylsulfonyl or 2-cyano-prop-2-yl.

26. (Currently amended) A compound or salt according to claim 16~~any one of claims 16–25~~, wherein R₃ is:

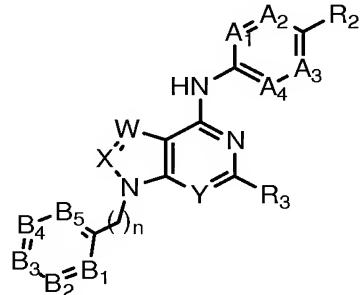
(a) hydrogen or cyano; or

(b) C₂-C₆alkyl ether, mono- or di-(C₁-C₆alkyl)aminoC₀-C₄alkyl or (4- to 10-membered heterocycloalkyl)C₀-C₆alkyl, each of which is substituted with from 0 to 4 substituents independently chosen from halogen, cyano, C₁-C₄alkyl, and haloC₁-C₄alkyl.

27. (Original) A compound or salt according to claim 26, wherein R₃ is hydrogen.

28. (Original) A compound or salt according to claim 26, wherein R₃ is C₂-C₆alkyl ether, mono- or di-(C₁-C₆alkyl)aminoC₀-C₄alkyl or (4- to 10-membered heterocycloalkyl)C₀-C₆alkyl, each of which is substituted with from 0 to 4 substituents independently chosen from halogen, cyano, methyl and ethyl.

29. (Currently amended) A compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

n is 0 or 1;

W, X and Y are each independently N or CR₁;

A₁ and A₄ are independently N or CH;

A₂ and A₃ are independently N or CR₄; such that neither A₂ nor A₃ is C₁-C₆alkyl if R₂ is C₁-C₆alkyl;

B_1 , B_2 , B_3 , B_4 and B_5 are each independently N or CR₅; such that at least one of B_1 , B_2 , B_3 , B_4 and B_5 is a substituted carbon;

R_1 is independently selected at each occurrence from hydrogen, halogen, hydroxy, cyano, nitro, amino, C₁-C₆alkyl, haloC₁-C₆alkyl, haloC₁-C₆alkoxy, C₁-C₆alkoxycarbonyl, aminosulfonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl;

R_2 is halogen, cyano, amino, C₃-C₆alkyl, cyanoC₁-C₆alkyl, haloC₁-C₆alkyl, mono- or di-(C₁-C₆alkyl)aminoC₀-C₄alkyl, C₁-C₆alkylsulfonyl, haloC₁-C₆alkylsulfonyl, mono- or di-(C₁-C₆alkyl)aminosulfonyl, or mono- or di-(C₁-C₆alkyl)aminocarbonyl;

R_3 is:

- (i) hydrogen, halogen, nitro or cyano; or
- (ii) a group of the formula $-R_x-L-M-R_y$, wherein:

R_x is C₀-C₃alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO₂, (C=O)_pN(R_z), N(R_z)(C=O)_p, SO₂N(R_z), or N(R_z)SO₂, wherein p is 0 or 1;

M is a single covalent bond, C₁-C₈alkyl, C₂-C₈alkenyl C₄-C₈alkenyl or C₂-C₈alkynylC₄-C₈alkynyl, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkoxy, (C₁-C₈alkyl)aminoC₀-C₈alkyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or
- (c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or
- (c) taken together with R_x or R_y to form a 3- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R₄ is independently selected at each occurrence from R_b, or two adjacent R₄ groups are taken together to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 4 substituents independently chosen from R_b;

R₅ is independently selected at each occurrence from hydrogen, hydroxy, halogen, amino, aminocarbonyl, cyano, nitro, -COOH, C₁-C₆alkyl, C₂-C₆alkenyl|C₄-C₆alkenyl, C₂-C₈alkynyl|C₄-C₆alkynyl, C₃-C₈cycloalkyl, haloC₁-C₆alkyl, aminoC₁-C₆alkyl, cyanoC₁-C₆alkyl, C₁-C₆alkoxy, haloC₁-C₆alkoxy, C₁-C₈alkanoyl, C₁-C₈alkanoyloxy, C₁-C₈alkylthio, C₂-C₈alkyl ether, C₁-C₆alkoxycarbonyl, aminosulfonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl; or two adjacent R₅ groups are taken together to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 4 substituents independently chosen from R_b; and

R_b is independently chosen at each occurrence from:

- (i) hydrogen, hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and -COOH; and
- (ii) C₁-C₈alkyl, C₂-C₈alkenyl|C₄-C₈alkenyl, C₂-C₈alkynyl|C₄-C₈alkynyl, C₃-C₈cycloalkyl, haloC₁-C₈alkyl, C₁-C₈alkoxy, haloC₁-C₈alkoxy, C₁-C₈alkanoyl, C₁-C₈alkanoyloxy, C₁-C₈alkylthio, C₂-C₈alkyl ether, C₁-C₆alkoxycarbonyl, C₁-C₆alkylsulfonyl, mono-

and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C₁-C₄alkyl, C₁-C₄alkoxy, hydroxyC₁-C₄alkyl, haloC₁-C₄alkyl, and mono- and di-(C₁-C₄alkyl)amino.

30. (Original) A compound or salt according to claim 29, wherein Y is N.

31. (Currently amended) A compound or salt according to claim 29—or ~~claim 30~~, wherein W is N and X is CR₁.

32. (Currently amended) A compound or salt according to claim 29—or ~~claim 30~~, wherein X is N and W is CR₁.

33. (Currently amended) A compound or salt according to claim 29any ~~one of claims 29-32~~, wherein n is 0.

34. (Cancelled)

35. (Currently amended) A compound or salt according to claim 29any ~~one of claims 29-34~~, wherein one or both of B₁ and B₅ is CR₅, and wherein R₅ at B₁ or B₅ is not hydrogen.

36. (Currently amended) A compound or salt according to claim 29any ~~one of claims 29-35~~, wherein each R₅ is independently chosen from hydrogen, halogen, cyano, -COOH, C₁-C₆alkyl, C₂-C₆alkenylC₁-C₆alkenyl, haloC₁-C₆alkyl, C₁-C₆alkoxy and haloC₁-C₆alkoxy.

37. (Currently amended) A compound or salt according to claim 29any ~~one of claims 29-36~~, wherein R₂ is halogen, isopropyl, t-butyl, trifluoromethyl, methylsulfonyl, trifluoromethylsulfonyl or 2-cyano-prop-2-yl.

38. (Currently amended) A compound or salt according to claim 29 ~~any one of claims 29-37~~, wherein R₃ is:

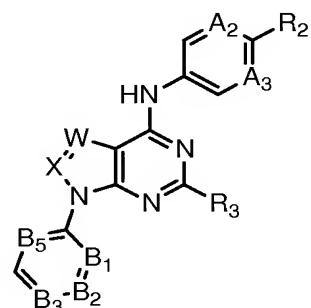
(a) hydrogen, halogen or cyano; or

(b) C₁-C₆alkyl, C₂-C₆alkyl ether, mono- or di-(C₁-C₆alkyl)aminoC₀-C₄alkyl or (4- to 10-membered heterocycloalkyl)C₀-C₆alkyl, each of which is substituted with from 0 to 4 substituents independently chosen from halogen, cyano, C₁-C₄alkyl, and haloC₁-C₄alkyl.

39. (Original) A compound or salt according to claim 38, wherein R₃ is hydrogen.

40. (Original) A compound or salt according to claim 38, wherein R₃ is C₂-C₆alkyl ether, mono- or di-(C₁-C₆alkyl)aminoC₀-C₄alkyl or (4- to 10-membered heterocycloalkyl)C₀-C₆alkyl, each of which is substituted with from 0 to 4 substituents independently chosen from halogen, cyano, methyl and ethyl.

41. (Currently amended) A compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

W and X are independently N or CR₁, such that at least one of W and X is N;

A₂ and A₃ are each CR₄;

B₁, B₂ and B₃ are CR₅; such that at least one R₅ is not hydrogen;

B₅ is N or CH;

R₁, if present, is hydrogen or methyl;

R₂ is halogen, isopropyl, t-butyl, haloC₁-C₆alkyl, C₁-C₆alkylsulfonyl, haloC₁-C₆alkylsulfonyl, hydroxyC₁-C₆alkyl or cyanoC₁-C₆alkyl;

R₃ is:

(a) hydrogen, halogen or cyano; or

(b) C₂-C₆alkyl ether, mono- or di-(C₁-C₆alkyl)aminoC₀-C₄alkyl or (4- to 10-membered heterocycloalkyl)C₀-C₆alkyl, each of which is substituted with from 0 to 4 substituents independently chosen from halogen, cyano, C₁-C₄alkyl, and haloC₁-C₄alkyl;

each R₄ is independently chosen from methyl, halogen and hydrogen; and

each R₅ is independently chosen from hydrogen, halogen, cyano, -COOH, C₁-C₆alkyl, C₂-C₆alkenylC₁-C₆alkenyl, haloC₁-C₆alkyl, C₁-C₆alkoxy and haloC₁-C₆alkoxy.

42. (Currently amended) A compound or salt according to claim 1any ~~one of claims 1-41~~, wherein the compound has an IC₅₀ value of 1 micromolar or less in a capsaicin receptor calcium mobilization assay.

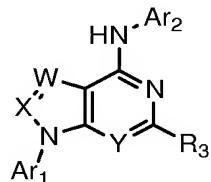
43. (Currently amended) A compound or salt according to claim 1any ~~one of claims 1-41~~, wherein the compound has an IC₅₀ value of 100 nanomolar or less in a capsaicin receptor calcium mobilization assay.

44. (Cancelled)

45. (Currently amended) A pharmaceutical composition, comprising at least one compound or salt according to claim 1any ~~one of claims 1-41~~, in combination with a physiologically acceptable carrier or excipient.

46. (Original) A pharmaceutical composition according to claim 45, wherein the composition is formulated as an injectible fluid, an aerosol, a cream, a gel, a pill, a capsule, a syrup or a transdermal patch.

47. (Currently amended) A method for reducing calcium conductance of a cellular capsaicin receptor, comprising contacting a cell expressing a capsaicin receptor with at least one compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

Ar₁ is a phenyl, benzyl or a 5- or 6-membered heteroaryl or (heteroaryl)methyl group, each of which is substituted with from 0 to 5 substituents independently chosen from R_b and groups that are taken together to form a fused 5- or 6-membered carbocycle or heterocycle that is substituted with from 0 to 5 substituents independently chosen from R_b;

Ar₂ is phenyl, naphthyl or a 5- to 10-membered heteroaryl group, each of which is substituted with from 0 to 5 substituents independently chosen from R_b;

W, X and Y are each independently N or CR₁;

R₁ is independently selected at each occurrence from hydrogen, halogen, cyano, nitro, amino, C₁-C₆alkyl, haloC₁-C₆alkyl, C₁-C₆alkoxy, haloC₁-C₆alkoxy, C₁-C₆alkoxycarbonyl, aminocarbonyl, aminosulfonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl;

R₃ is:

- (i) hydrogen, halogen, nitro or cyano; or
- (ii) a group of the formula -R_x-L-M-R_y, wherein:

R_x is C₀-C₃alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO₂, (C=O)_pN(R_z), N(R_z)(C=O)_p, SO₂N(R_z), or N(R_z)SO₂, wherein p is 0 or 1;

M is a single covalent bond, C₁-C₈alkyl, C₂-C₈alkenyl, C₁-C₈alkenyl or C₂-C₈alkynyl, C₁-C₈alkynyl, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkoxy, (C₁-C₈alkyl)aminoC₀-C₈alkyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or
- (c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or
- (c) taken together with R_x or R_y to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b; and

R_b is independently chosen at each occurrence from:

- (i) hydrogen, hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and -COOH; and

(ii) C₁-C₈alkyl, C₂-C₈alkenylC₄-C₈alkenyl, C₂-C₈alkynyIC₄-C₈alkynyl, C₃-C₈cycloalkyl, haloC₁-C₈alkyl, C₁-C₈alkoxy, haloC₁-C₈alkoxy, C₁-C₈alkanoyl, C₁-C₈alkanoyloxy, C₁-C₈alkylthio, C₂-C₈alkyl ether, C₁-C₆alkoxycarbonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C₁-C₄alkyl, C₁-C₄alkoxy, hydroxyC₁-C₄alkyl, haloC₁-C₄alkyl, and mono- and di-(C₁-C₄alkyl)amino;

and thereby reducing calcium conductance of the capsaicin receptor.

48. (Currently amended) A method according to claim 47, wherein the compound is a compound according to ~~claim 1~~^{any one of claims 1-41}.

49. (Original) A method according to claim 47, wherein the cell is contacted *in vivo* in an animal.

50. (Original) A method according to claim 49, wherein the cell is a neuronal cell.

51. (Original) A method according to claim 49, wherein the cell is a urothelial cell.

52. (Original) A method according to claim 49, wherein during contact the compound is present within a body fluid of the animal.

53. (Original) A method according to claim 49, wherein the compound is present in the blood of the animal at a concentration of 1 micromolar or less.

54. – 55. (Cancelled)

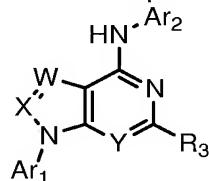
56. (Original) A method according to claim 49, wherein the animal is a human.

57. (Original) A method according to claim 49, wherein the compound is administered orally.

58. – 62. (Cancelled)

63. (Original) A method according to claim 60, wherein the compound is present in the blood of the patient at a concentration of 1 micromolar or less.

64. (Currently amended) A method for treating a condition responsive to capsaicin receptor modulation in a patient, comprising administering to the patient a therapeutically effective amount of at least one compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

Ar₁ is a phenyl, benzyl or a 5- or 6-membered heteroaryl or (heteroaryl)methyl group, each of which is substituted with from 0 to 5 substituents independently chosen from R_b and groups that are taken together to form a fused 5- or 6-membered carbocycle or heterocycle that is substituted with from 0 to 5 substituents independently chosen from R_b;

Ar₂ is phenyl, naphthyl or a 5- to 10-membered heteroaryl group, each of which is substituted with from 0 to 5 substituents independently chosen from R_b;

W, X and Y are each independently N or CR₁;

R₁ is independently selected at each occurrence from hydrogen, halogen, cyano, nitro, amino, C₁-C₆alkyl, haloC₁-C₆alkyl, C₁-C₆alkoxy, haloC₁-C₆alkoxy, C₁-C₆alkoxycarbonyl, aminocarbonyl, aminosulfonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl;

R₃ is:

- (i) hydrogen, halogen, nitro or cyano; or
- (ii) a group of the formula -R_x-L-M-R_y, wherein:

R_x is C₀-C₃alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO₂, (C=O)_pN(R_z), N(R_z)(C=O)_p, SO₂N(R_z), or N(R_z)SO₂, wherein p is 0 or 1;

M is a single covalent bond, C₁-C₈alkyl, C₂-C₈alkenyl, C₁-C₈alkenyl or C₂-C₈alkynyl, C₁-C₈alkynyl, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkoxy, (C₁-C₈alkyl)aminoC₀-C₈alkyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or
- (c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or
- (c) taken together with R_x or R_y to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b; and

R_b is independently chosen at each occurrence from:

- (i) hydrogen, hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and -COOH; and

| (ii) C₁-C₈alkyl, C₂-C₈alkenylC₄-C₈alkenyl, C₂-C₈alkynyIC₄-C₈alkynyl, C₃-C₈cycloalkyl, haloC₁-C₈alkyl, C₁-C₈alkoxy, haloC₁-C₈alkoxy, C₁-C₈alkanoyl, C₁-C₈alkanoyloxy, C₁-C₈alkylthio, C₂-C₈alkyl ether, C₁-C₆alkoxycarbonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C₁-C₄alkyl, C₁-C₄alkoxy, hydroxyC₁-C₄alkyl, haloC₁-C₄alkyl, and mono- and di-(C₁-C₄alkyl)amino;

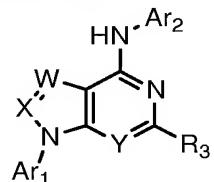
and thereby alleviating the condition in the patient.

| 65. (Currently amended) A method according to claim 64, wherein the compound is a compound according to claim 1~~any one of claims 1-41~~.

| 66. (Original) A method according to claim 64, wherein the patient is suffering from (i) exposure to capsaicin, (ii) burn or irritation due to exposure to heat, (iii) burns or irritation due to exposure to light, (iv) burn, bronchoconstriction or irritation due to exposure to tear gas, infectious agents, air pollutants or pepper spray, or (v) burn or irritation due to exposure to acid.

| 67. (Original) A method according to claim 64, wherein the condition is asthma or chronic obstructive pulmonary disease.

| 68. (Currently amended) A method for treating pain in a patient, comprising administering to a patient suffering from pain a therapeutically effective amount of at least one compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

Ar₁ is a phenyl, benzyl or a 5- or 6-membered heteroaryl or (heteroaryl)methyl group, each of which is substituted with from 0 to 5 substituents independently chosen from R_b and groups that are taken together to form a fused 5- or 6-membered

carbocycle or heterocycle that is substituted with from 0 to 5 substituents independently chosen from R_b;

Ar₂ is phenyl, naphthyl or a 5- to 10-membered heteroaryl group, each of which is substituted with from 0 to 5 substituents independently chosen from R_b;

W, X and Y are each independently N or CR₁;

R₁ is independently selected at each occurrence from hydrogen, halogen, cyano, nitro, amino, C₁-C₆alkyl, haloC₁-C₆alkyl, C₁-C₆alkoxy, haloC₁-C₆alkoxy, C₁-C₆alkoxycarbonyl, aminocarbonyl, aminosulfonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl;

R₃ is:

- (i) hydrogen, halogen, nitro or cyano; or
- (ii) a group of the formula -R_x-L-M-R_y, wherein:

R_x is C₀-C₃alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO₂, (C=O)_pN(R_z), N(R_z)(C=O)_p, SO₂N(R_z), or N(R_z)SO₂, wherein p is 0 or 1;

M is a single covalent bond, C₁-C₈alkyl, C₂-C₈alkenyl G₄-C₈alkenyl or C₂-C₈alkynylG₄-C₈alkynyl, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkoxy, (C₁-C₈alkyl)aminoC₀-C₈alkyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or
- (c) taken together with R_x or R_y to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b; and

R_b is independently chosen at each occurrence from:

- (i) hydrogen, hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and -COOH; and
- | (ii) C₁-C₈alkyl, C₂-C₈alkenylG₁-C₈alkenyl, C₂-C₈alkynylG₁-C₈alkynyl, C₃-C₈cycloalkyl, haloC₁-C₈alkyl, C₁-C₈alkoxy, haloC₁-C₈alkoxy, C₁-C₈alkanoyl, C₁-C₈alkanoyloxy, C₁-C₈alkylthio, C₂-C₈alkyl ether, C₁-C₆alkoxycarbonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C₁-C₄alkyl, C₁-C₄alkoxy, hydroxyC₁-C₄alkyl, haloC₁-C₄alkyl, and mono- and di-(C₁-C₄alkyl)amino;

and thereby alleviating pain in the patient.

69. (Currently amended) A method according to claim 68, wherein the compound is a compound according to claim 1~~any one of claims 1-41~~.

70. (Original) A method according to claim 68, wherein the compound is present in the blood of the patient at a concentration of 1 micromolar or less.

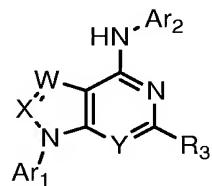
71. – 72. (Cancelled)

73. (Original) A method according to claim 68, wherein the patient is suffering from neuropathic pain.

74. (Original) A method according to claim 68, wherein the pain is associated with a condition selected from: postmastectomy pain syndrome, stump pain, phantom limb pain, oral neuropathic pain, toothache, postherpetic neuralgia, diabetic neuropathy, reflex sympathetic dystrophy, trigeminal neuralgia, osteoarthritis, rheumatoid arthritis, fibromyalgia, Guillain-Barre syndrome, meralgia paresthetica, burning-mouth syndrome, bilateral peripheral neuropathy, causalgia, neuritis, neuronitis, neuralgia, AIDS-related neuropathy, MS-related neuropathy, spinal cord injury-related pain, surgery-related pain, musculoskeletal pain, back pain, headache, migraine, angina, labor, hemorrhoids, dyspepsia, Charcot's pains, intestinal gas, menstruation, cancer, venom exposure, irritable bowel syndrome, inflammatory bowel disease and trauma.

75. (Original) A method according to claim 68, wherein the patient is a human.

76. (Currently amended) A method for treating itch in a patient, comprising administering to a patient a therapeutically effective amount of a compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

Ar₁ is a phenyl, benzyl or a 5- or 6-membered heteroaryl or (heteroaryl)methyl group, each of which is substituted with from 0 to 5 substituents independently chosen from R_b and groups that are taken together to form a fused 5- or 6-membered

carbocycle or heterocycle that is substituted with from 0 to 5 substituents independently chosen from R_b;

Ar₂ is phenyl, naphthyl or a 5- to 10-membered heteroaryl group, each of which is substituted with from 0 to 5 substituents independently chosen from R_b;

W, X and Y are each independently N or CR₁;

R₁ is independently selected at each occurrence from hydrogen, halogen, cyano, nitro, amino, C₁-C₆alkyl, haloC₁-C₆alkyl, C₁-C₆alkoxy, haloC₁-C₆alkoxy, C₁-C₆alkoxycarbonyl, aminocarbonyl, aminosulfonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl;

R₃ is:

- (i) hydrogen, halogen, nitro or cyano; or
- (ii) a group of the formula -R_x-L-M-R_y, wherein:

R_x is C₀-C₃alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO₂, (C=O)_pN(R_z), N(R_z)(C=O)_p, SO₂N(R_z), or N(R_z)SO₂, wherein p is 0 or 1;

M is a single covalent bond, C₁-C₈alkyl, C₂-C₈alkenyl G₄-C₈alkenyl or C₂-C₈alkynylG₄-C₈alkynyl, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkoxy, (C₁-C₈alkyl)aminoC₀-C₈alkyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or

(c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or
- (c) taken together with R_x or R_y to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b; and

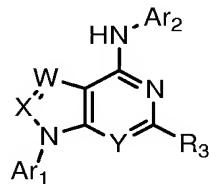
R_b is independently chosen at each occurrence from:

- (i) hydrogen, hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and -COOH; and
- (ii) C₁-C₈alkyl, C₂-C₈alkenyl, C₄-C₈alkenyl, C₂-C₈alkynyl, C₄-C₈alkynyl, C₃-C₈cycloalkyl, haloC₁-C₈alkyl, C₁-C₈alkoxy, haloC₁-C₈alkoxy, C₁-C₈alkanoyl, C₁-C₈alkanoyloxy, C₁-C₈alkylthio, C₂-C₈alkyl ether, C₁-C₆alkoxycarbonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C₁-C₄alkyl, C₁-C₄alkoxy, hydroxyC₁-C₄alkyl, haloC₁-C₄alkyl, and mono- and di-(C₁-C₄alkyl)amino;

and thereby alleviating itch in the patient.

77. (Currently amended) A method according to claim 76, wherein the compound is a compound according to claim 1 ~~any one of claims 1-41~~.

78. (Currently amended) A method for treating cough or hiccup in a patient, comprising administering to a patient a therapeutically effective amount of a compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

Ar₁ is a phenyl, benzyl or a 5- or 6-membered heteroaryl or (heteroaryl)methyl group, each of which is substituted with from 0 to 5 substituents independently chosen from R_b and groups that are taken together to form a fused 5- or 6-membered carbocycle or heterocycle that is substituted with from 0 to 5 substituents independently chosen from R_b;

Ar₂ is phenyl, naphthyl or a 5- to 10-membered heteroaryl group, each of which is substituted with from 0 to 5 substituents independently chosen from R_b;

W, X and Y are each independently N or CR₁;

R₁ is independently selected at each occurrence from hydrogen, halogen, cyano, nitro, amino, C₁-C₆alkyl, haloC₁-C₆alkyl, C₁-C₆alkoxy, haloC₁-C₆alkoxy, C₁-C₆alkoxycarbonyl, aminocarbonyl, aminosulfonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl;

R₃ is:

- (i) hydrogen, halogen, nitro or cyano; or
- (ii) a group of the formula -R_x-L-M-R_y, wherein:

R_x is C₀-C₃alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO₂, (C=O)_pN(R_z), N(R_z)(C=O)_p, SO₂N(R_z), or N(R_z)SO₂, wherein p is 0 or 1;

M is a single covalent bond, C₁-C₈alkyl, C₂-C₈alkenyl, C₁-C₈alkenyl or C₂-C₈alkynyl, C₁-C₈alkynyl, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkoxy, (C₁-C₈alkyl)aminoC₀-C₈alkyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or
- (c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or
- (c) taken together with R_x or R_y to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b; and

R_b is independently chosen at each occurrence from:

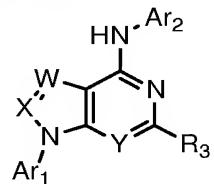
- (i) hydrogen, hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and -COOH; and

(ii) C₁-C₈alkyl, C₂-C₈alkenylC₄-C₈alkenyl, C₂-C₈alkynylC₄-C₈alkynyl, C₃-C₈cycloalkyl, haloC₁-C₈alkyl, C₁-C₈alkoxy, haloC₁-C₈alkoxy, C₁-C₈alkanoyl, C₁-C₈alkanoyloxy, C₁-C₈alkylthio, C₂-C₈alkyl ether, C₁-C₆alkoxycarbonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C₁-C₄alkyl, C₁-C₄alkoxy, hydroxyC₁-C₄alkyl, haloC₁-C₄alkyl, and mono- and di-(C₁-C₄alkyl)amino;

and thereby alleviating cough or hiccup in the patient.

79. (Currently amended) A method according to claim 78, wherein the compound is a compound according to ~~claim 1 any one of claims 1-41~~.

80. (Currently amended) A method for treating urinary incontinence or overactive bladder in a patient, comprising administering to a patient a therapeutically effective amount of a compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:

Ar₁ is a phenyl, benzyl or a 5- or 6-membered heteroaryl or (heteroaryl)methyl group, each of which is substituted with from 0 to 5 substituents independently chosen from R_b and groups that are taken together to form a fused 5- or 6-membered carbocycle or heterocycle that is substituted with from 0 to 5 substituents independently chosen from R_b;

Ar₂ is phenyl, naphthyl or a 5- to 10-membered heteroaryl group, each of which is substituted with from 0 to 5 substituents independently chosen from R_b;

W, X and Y are each independently N or CR₁;

R₁ is independently selected at each occurrence from hydrogen, halogen, cyano, nitro, amino, C₁-C₆alkyl, haloC₁-C₆alkyl, C₁-C₆alkoxy, haloC₁-C₆alkoxy, C₁-C₆alkoxycarbonyl, aminocarbonyl, aminosulfonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl;

R₃ is:

- (i) hydrogen, halogen, nitro or cyano; or
- (ii) a group of the formula -R_x-L-M-R_y, wherein:

R_x is C₀-C₃alkylene;

L is a single covalent bond, O, (C=O), (C=O)O, O(C=O), S, SO₂, (C=O)_pN(R_z), N(R_z)(C=O)_p, SO₂N(R_z), or N(R_z)SO₂, wherein p is 0 or 1;

M is a single covalent bond, C₁-C₈alkyl, C₂-C₈alkenyl C₁-C₈alkenyl or C₂-C₈alkynylC₁-C₈alkynyl, wherein each alkyl, alkenyl or alkynyl is substituted with from 0 to 9 substituents independently selected from R_b; and

R_y is:

- (a) hydrogen;
- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkoxy, (C₁-C₈alkyl)aminoC₀-C₈alkyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or
- (c) taken together with R_x or R_z to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b;

R_z is:

- (a) hydrogen;

- (b) C₁-C₈alkyl, C₂-C₈alkenyl, C₂-C₈alkynyl, C₁-C₈alkanoyl, C₃-C₈alkanone, C₂-C₈alkyl ether, or a 3- to 10-membered carbocycle or heterocycle, each of which is substituted with from 0 to 9 substituents independently selected from R_b; or
- (c) taken together with R_x or R_y to form a 4- to 10-membered carbocycle or heterocycle that is substituted with from 0 to 9 substituents independently selected from R_b; and

R_b is independently chosen at each occurrence from:

- (i) hydrogen, hydroxy, halogen, amino, aminocarbonyl, aminosulfonyl, cyano, nitro and -COOH; and
- (ii) C₁-C₈alkyl, C₂-C₈alkenyl C₁-C₈alkenyl, C₂-C₈alkynyl C₁-C₈alkynyl, C₃-C₈cycloalkyl, haloC₁-C₈alkyl, C₁-C₈alkoxy, haloC₁-C₈alkoxy, C₁-C₈alkanoyl, C₁-C₈alkanoyloxy, C₁-C₈alkylthio, C₂-C₈alkyl ether, C₁-C₆alkoxycarbonyl, C₁-C₆alkylsulfonyl, mono- and di-(C₁-C₆alkyl)aminosulfonyl, mono- and di-(C₁-C₆alkyl)aminocarbonyl, and mono- and di-(C₁-C₆alkyl)aminoC₀-C₄alkyl; each of which is substituted with from 0 to 3 substituents independently chosen from hydroxy, halogen, amino, cyano, C₁-C₄alkyl, C₁-C₄alkoxy, hydroxyC₁-C₄alkyl, haloC₁-C₄alkyl, and mono- and di-(C₁-C₄alkyl)amino;

and thereby alleviating urinary incontinence or overactive bladder in the patient.

81. (Currently amended) A method according to claim 80, wherein the compound is a compound according to claim 1 and ~~any one of claims 1-41~~.

82. – 86. (Cancelled)

87. (Original) A packaged pharmaceutical preparation, comprising:

- (a) a pharmaceutical composition according to claim 45 in a container; and

(b) instructions for using the composition to treat pain.

88. (Original) A packaged pharmaceutical preparation, comprising:

(a) a pharmaceutical composition according to claim 45 in a container;
and

(b) instructions for using the composition to treat cough or hiccup.

89. (Cancelled)

90. (Original) A packaged pharmaceutical preparation, comprising:

(a) a pharmaceutical composition according to claim 45 in a container;
and

(b) instructions for using the composition to treat urinary incontinence
or overactive bladder.

91. – 92. (Cancelled)